

**INSTRUCTIONS FOR COMPLETING
FORM DEP7007Y
GOOD ENGINEERING PRACTICE (GEP) STACK HEIGHT DETERMINATION
KENTUCKY DIVISION FOR AIR QUALITY**

COMPLETE 7007Y ONLY FOR STACKS 65M OR TALLER

EXHAUST POINT INFORMATION:

- 1) **FLOW DIAGRAM DESIGNATION:** The flow diagram designation must be stated, along with the label applied to the applicable flow diagram.
- 5) **GEP HEIGHT:** Good Engineering Practice (GEP) Stack Height, as defined in 401 KAR 50:042, Section 2(5), means the greater of:
- a) 65 meters, measured from the ground-level elevation at the base of the stack;
 - b) For stacks in existence on January 12, 1979, and for which the owner or operator had obtained all applicable permits or approvals,
 $H_g = 2.5 \times H$
 - c) For all other stacks,
 $H_g = H + 1.5L$

Where

H_g = Good engineering practice stack height, measured from the ground-level elevation at the base of the stack.

H = Height of nearby structure(s) measured from the ground-level elevation at the base of the stack;

L = Lesser dimension, height or projected width, of nearby structure(s).

- 6) **EQUIVALENT DIAMETER OF EXHAUST POINT:** If exit point of the stack is square or rectangular, the equivalent diameter must be determined by the following formula:

$$\text{Diameter} = 1.128 \times (\text{Area of Stack Exit})^{0.5}$$

- 9) **DIRECTION OF EXHAUST:** The direction that the exhaust stack directs the exhaust gas must be described here. For example, if the exhaust stack is on the side of the building with a cover pointing the exhaust gas towards the ground, the direction would be stated as downward.

NOTE: The applicant only needs to provide either item 10 or 11 on the application form, not both. Given one, the Agency will calculate the other.

- 10) **LATITUDE AND LONGITUDE:** The latitude and longitude of a point at the center of the unit must be provided here. These parameters can be determined from the United States Geological Survey (USGS) map that contains this unit. Maps can be obtained from USGS for a fee. These maps may be found at a local library.
- 11) **UTM*:** The Universal Transverse Mercator zone and horizontal (easting) and vertical (northing) coordinates of a point at the center of the unit must be provided if the latitude and longitude were not provided. The UTM coordinate system, which has units of kilometers, divides the globe into 60 north-south zones each covering six degrees of longitude. Two zones (16 & 17) cover the State of Kentucky. Sources west of 84 degrees are in Zone 16 while sources east of 84 degrees are in Zone 17. Sources in Kentucky may only have vertical coordinate ranging from 4042.000 – 4235.000 kilometers. The allowable range of horizontal values are as follows:
Zone 16: 270.0 – 769.000 kilometers
Zone 17: 23.000 – 415.000 kilometers

*UTM coordinates can be obtained by referring to a USGS Topographic Map.

- 15) If this exhaust point is utilized by other emission units or control devices, excluding the fuel combustion emission unit, they are to be listed here with their flow diagram designations.